

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A communications method comprising:

2 ~~using an amplifier, performing amplification of a small number of transmit
3 tones, the amplification producing obtaining unwanted intermodulation distortion
4 products from an amplifier;~~

5 measuring the intermodulation distortion products to obtain an
6 intermodulation distortion product measurements; and

7 determining whether amplifier linearity is within an acceptable range based
8 on the intermodulation distortion product measurement and a desired data rate;
9 and

10 controlling the amplifier to reduce output signal distortion for data rates
11 higher than the desired data rate but not for data rates below the desired data rate.

1 2. (Currently Amended) The method of claim 1, further comprising:

2 adjusting amplifier linearity to fall within said acceptable range.

- 1 3. (Currently Amended) The method of claim 2,- 2 wherein adjusting amplifier linearity further comprises:
 - 3 determining an acceptable error vector magnitude for the desired data
 - 4 rate;
 - 5 determining a corresponding desired third-order output intercept point
 - 6 value; and
 - 7 adjusting at least one amplifier control signal in response to the
 - 8 desired third-order output intercept point value.
- 1 4. (Currently Amended) The method of claim 1, further comprising:
 - 2 receiving the intermodulation distortion products through a leakage path.
- 1 5. (Currently Amended) The method of claim 4,- 2 wherein measuring the intermodulation distortion products further
- 3 comprises:
 - 4 transforming a received signal from the time domain to the frequency
 - 5 domain.
- 1 6. (Currently Amended) The method of claim 1, further comprising:

2 | ~~producing the small number of transmit tones using an IFFT operation to~~
3 | obtain the unwanted intermodulation distortion products.

1 | 7. (Currently Amended) A communications apparatus comprising:
2 | ~~an amplifier (121) for performing amplification of a small number of transmit~~
3 | ~~tones, the amplification producing that produces~~ unwanted intermodulation
4 | distortion products;

5 | means for measuring the intermodulation distortion products to obtain an
6 | intermodulation distortion product measurement; and
7 | means for determining whether amplifier linearity is within an acceptable
8 | range based on the intermodulation distortion product measurement and a desired
9 | data rate; and

10 | means for controlling the amplifier to reduce output signal distortion for data
11 | rates higher than the desired data rate but not for data rates below the desired data
12 | rate.

1 | 8. (Currently Amended) The apparatus of claim 7, further comprising:
2 | means for adjusting amplifier linearity to fall within said acceptable range.

1 | 9. (Currently Amended) The apparatus of claim 8,

2 wherein said means for adjusting amplifier linearity further comprises:
3 means for determining an acceptable error vector magnitude for the
4 desired data rate;
5 means for determining a corresponding desired third-order output
6 intercept point value; and
7 means for adjusting at least one amplifier control signal in response to
8 the desired third-order output intercept point value.

1 10. (Currently Amended) The apparatus of claim 7, further comprising:
2 a leakage path through which the intermodulation distortion products are
3 received.

1 11. (Currently Amended) The apparatus of claim 10;
2 wherein said means for measuring the intermodulation distortion products
3 further comprises an FFT block.

1 12. (Currently Amended) The apparatus of claim 7, further comprising:
2 and an IFFT block that obtains the unwanted intermodulation distortion
3 products for producing the small number of transmit tones.